International Journal of Scientific Research and Management (IJSRM)
||Volume||14||Issue||01||Pages||2575-2584||2026||
Website: https://ijsrm.net ISSN (e): 2321-3418
DOI: 10.18535/ijsrm/v14i01.sh05

Fluid Media Ecosystems: Reconceptualizing Radio Content Distribution in the Age of Digital Disruption

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Abstract
The digital transformation of broadcasting has transformed it from static terrestrial media into a dynamic media ecosystem. Previous research has primarily focused on the technological shift towards digitalization, but significant gaps remain in understanding how broadcast management should address platformization and algorithmic dependence. This study aimed to reconstruct broadcast content distribution strategies through a qualitative survey conducted at multiple locations in Indonesia. The research subjects included three different types of radio stations: Gen FM (urban and opinion leader-driven), Swaragama FM (data-driven), and Nebula FM (regional, hyperlocal, and resilient). Data collection methods included in-depth interviews with industry leaders and longitudinal analyses of digital performance indicators. The results indicate that the "renaissance of broadcasting" represents not only a platform shift but also a strategic restructuring of audience engagement and online interactions. The study identifies three emerging strategies: using algorithms to guide users to occupy visual platforms, challenging traditional rating systems through data-driven decoupling, and using hyperlocalization as a defense against the apathy of global streaming services. The study concludes that the survival of traditional media in the Global South depends on their ability to continue functioning as "everyday media" and to transform from frequency providers into influence management centers. Theoretically, this study provides a new framework for media resilience, pointing out that flexibility the ability to navigate ever-changing digital boundaries is the most important passport for modern broadcasting.

Keywords: *Fluid Media Ecosystems, Platformization, Radio Broadcasting, Media Resilience, Content Distribution*

1. Introduction

In the global media landscape of 2025, the broadcasting industry faces what scholars describe as the "audiovisual demise" of traditional platforms. From North America to Western Europe, traditional radio is struggling to maintain its position among younger audiences as the rise of Spotify, YouTube Music, and Apple Music has fundamentally altered the listening habits of Generation Alpha and Generation Z. (Sjøvaag et al., 2024). Recent data from major markets show that traditional radio listenership in urban areas has declined by nearly 30%, replaced by algorithmic programming from global streaming giants that offer a seemingly impersonal yet highly personalized listening experience (Colbjørnsen, 2021; Metzler and Garcia, 2024). This shift has led many to predict the "death of frequencies" because the traditional broadcasting mode, once characterized by linear one-to-many communication, can no longer meet the demands of modern prosumers for on-demand flexibility and social integration.

A striking paradox is evident in the Global South, particularly in Indonesia. Despite being considered one of the most social media-connected countries in the world, Indonesian broadcasting has demonstrated remarkable resilience. While the Western broadcasting industry continues to decline, Indonesian broadcasting is experiencing a “revival,” as this study describes. Coverage data for 2024/25 show that over 25 million Indonesian citizens listen to their favorite local radio stations daily (Pusparisa, 2025; Adhy Trisnanto, 2025), indicating that the so-called "death of broadcasting" is not an unavoidable reality but

rather a strategic challenge concerning distributional flexibility in the digital age. In light of this global and local paradox, it is essential to investigate the underlying mechanisms that enable Indonesian broadcasting to thrive in the face of digital competition. This study moves beyond the purely technical aspects of streaming and focuses on a strategic reconceptualization of the media itself. Therefore, this study addresses the following analytical questions:

RQ1: The Conceptual Shift

How does radio management in Indonesia reconceptualize the transition from terrestrial-linear broadcasting to a fluid-platformized distribution model?"

RQ2: The Negotiation with Platforms

"To what extent do different market typologies (Metropolitan, Intellectual, and Regional) dictate the negotiation between algorithmic logic and human agency

RQ3: The Theoretical Contribution

How can the 'Renaissance Radio' phenomenon be formulated as a sustainable theoretical framework for media resilience in the Global South?"

2. Literature Review

2.1. The Platformization of Cultural Production

The concept of "platformization" describes the significant influence of digital platforms on organizational frameworks and distribution strategies within the cultural economy. (Nieborg & Poell, 2018). In the realm of broadcasting, platformization represents a shift: broadcast media are no longer limited to their independent terrestrial confines but instead depend on the algorithmic logic of global platforms like Spotify, TikTok, and YouTube.(Colbjørnsen, 2021). This study argues that broadcast distribution models have evolved from a push model (linear broadcast programming) to a participatory model, where content must adapt to the opaque metrics of the digital platforms. Consequently, radio stations depend on infrastructure because their visibility depends on their ability to navigate the ever-changing rules of the attention economy (Nieborg & Poell, 2018)

2.2. Hybrid Media Systems and Distributional Agility

This study conducts an in-depth examination of the "Renaissance of Radio" through the lens of the Hybrid Media System framework. (Chadwick, 2017). Hybridity suggests that old and new media logics do not exist in isolation; rather, they are inextricably intertwined. In the modern era, radio does not choose between "analog" or "digital," but operates within a fluid ecosystem where terrestrial FM transmission provides brand legitimacy and trust, while digital networks provide reach and interactivity. (Rega, 2025). This hybridity demands "distributional agility" from radio management, requiring them to synchronize the "broadcast logic" (one-to-many) with the "network logic" (many-to-many) without losing the medium's original identity. (Jenkins, 2020).

2.3. Social Presence and Parasocial Interaction in Audio Ecosystems

In the realm of radio broadcasting, its essence is not found in the mechanical precision of algorithms but rather in the harmonious interplay of human connection. (Suen & Hung, 2025). The presenter's voice creates a tapestry of quasi-social interactions, offering solace to listeners and enveloping them in a comforting sense of companionship. (Su et al., 2021). In an era dominated by artificial intelligence, where playlists are as impersonal as a stranger's gaze, the human element of radio remains its most significant attribute. This study posits that amidst the relentless progression of global digitization, the dual pillars of localization and emotional intimacy serve as fortresses of resilience for local radio stations, enabling them to fulfill social integration needs that impersonal algorithms cannot replicate. (Abunyewah et al., 2023).

2.4. The Global South Perspective: Why the "Death of Radio" is a Western Myth

In media studies, there is often a noticeable "Nordic bias" in mainstream discussions. This means that technological trends seen in North America and Europe are often viewed as if they apply universally.(Wasserman, 2011). In the Northern Hemisphere, the "decline of broadcasting" is widely regarded as an unavoidable consequence of digital transformation, driven by the extensive accessibility of high-speed broadband and the swift progress of infotainment systems in autonomous vehicles, which tend to prioritize streaming services over FM broadcasting. (Metzler & Garcia, 2024). However, this study contends that broadcasting development in the Southern Hemisphere, particularly in Indonesia, adheres to a different logic.

In the vast Southern Hemisphere, broadcasting is a vital link and beacon of the Internet, intricately intertwined with social structures. It transcends tradition and has become an indispensable pillar of infrastructure. This transformation is shaped by the complex interplay of three sociotechnical factors.

1. We now explore the distinctions in infrastructure. In vibrant metropolitan regions, complex and interrelated systems are developed through digital networks. However, in some areas, analog signals remain the preferred option. These places often face challenges such as tough geography or limited budgets; therefore, they rely on the tried-and-true effectiveness and affordability of analog signals to bridge the gap in accessing information.(Li et al., 2022)
2. In Indonesian society, there is a rich oral tradition in which the human voice plays a vital role in keeping communities connected and cohesive. Unlike Spotify's individualistic consumption model, in the Southern Hemisphere, radio often plays a role in the community context, thus fostering a shared sense of reality (Jurriëns, 2017)
3. The "Mobile-First" Paradox: Interestingly, the widespread adoption of smartphones in Indonesia has not replaced radio; instead, it has opened new channels for its dissemination.(Geryantika Kurnia, 2024)

By examining this study within the context of the Southern Hemisphere, we move beyond the pessimistic views of the decline of traditional media and gain a more nuanced understanding of media hybridity. This investigation suggests that Indonesia's "re revitalization" demonstrates how traditional media can utilize their cultural assets to thrive in the platform era, a phenomenon often disregarded in Western media theories.

3. Research Methodology

3.1. Research Design: Multi-sited Qualitative Inquiry

This study employs a multisite case study design (Marcus, 1995) to capture digital communication phenomena in three different social contexts in Indonesia. This approach was chosen because broadcast communication strategies are not uniform but are heavily influenced by regional market types and the digital infrastructure.

3.2. Site Selection and Informants (Purposive Sampling)

We selected three locations to represent different stages of the Indonesian media ecosystem: Urban Center (Jakarta Gen FM), representing a market facing the highest competitive pressure owing to platformization. Knowledge-Based Urban Center (Yogyakarta Swaragama FM): representing a market based on a well-educated population and data-driven innovation. Regional Community Center (Palu Nebula FM): Represents a market with strong local social capital.

The principal sources of information comprised three radio executives empowered to make strategic decisions, along with a regulatory representative from the Ministry of Communications and Information (Kemenkominfo), who contributed a macro-political perspective.(Pengurus Pusat PRSSNI, 2025).

3.3. Data Collection: Triangulation of Sources

This study used in-depth and semi-structured interviews for triangulation to manage the algorithmic disruption and change in their business models. Hence, it can be termed as a digital ethnography (observation) where the researchers observed the participants' digital distribution platforms TikTok, Instagram, Spotify, and mobile applications to check whether management narratives matched actual content executions. Another method used was a review of the literature, whereby data pertaining to digital coverage growth between 2024 and 2026 were analyzed together with information from various country 5G broadcasting policy reports.

3.4. Data Analysis: Thematic Networking

A topical analysis with three coding phases was used. Open coding identified basic strategies, e.g., "creating podcasts," "TikTok live." The codes were then grouped into conceptual categories during axial coding, such as "algorithmic negotiation. "The overall theme that answers the research question was extracted during selective coding, i.e., building a model of a "mobile media ecosystem."

Member validation was used to ensure the reliability of the study. The topics of analysis were given back to respondents so that they could check whether the conceptual explanations had captured their strategic experience accurately.

4. Finding and Discussion

Data from three different radio stations in Indonesia's capital, GenFM, SwaragamaFM, and NebulaFM, show significant differences in their digitalization strategies. While all broadcasters attempt to increase their digital strength, their specific approaches are different owing to the different demographics of the audience, the behavior of the audience, and the infrastructure. Table 1 provides a comparative overview of these strategies, which are then analyzed using the concept of a "mobile media ecosystem.

Table 1. Comparative Analysis of Fluid Media Strategies in Three Market Typologies

Feature	Gen FM Jakarta (Metropolitan)	Swaragama FM (Intellectual)	Nebula FM Palu (Regional)
Primary Logic	Platformization & Influence	Hybridity & Data-Driven	Social Presence & Resiliency
Digital Strategy	Algorithmic Grooming: Visual-first content for TikTok/Reels.	Distributional Decoupling: High-fidelity app & data metrics.	Hyper-Localism: Community-based engagement via WhatsApp.
The "Human" Role	Announcer as Digital Influencer.	Announcer as Curated Content Expert.	Announcer as Community Solutions Hub.
Market Challenge	Attention Economy & Big Tech competition.	Metric Gap between digital reach and ad-spend.	Digital Infrastructure & Connectivity gaps.
Revenue Model	Multi-platform Sponsorship & Social Engagement.	Data-driven targeted ads & B2B intellectual partnerships.	Community activations & Social Capital-based local ads.

Source: Processed by Peneliti

Gen FM Jakarta: Algorithmic Grooming and the Attention Economy in Metropolitan Markets

The findings regarding Swaragama FM reveal a sophisticated reconceptualization of radio distribution in Sri Lanka. Management no longer views the 101.7 FM frequency as a "primary target' but rather as a "trust anchor" within the hybrid media system. By integrating high-resolution streaming applications and data-driven content, Swaragama practices what this study calls "distribution decoupling. They are decoupling the brand from the physical transmitter. However, as Swaragama navigates this hybridity, they encounter the 'Metric Gap' a situation where digital reach is high, but the economic logic of local advertisers remains 'stuck' in the analog era. Thus, answering RQ1, the transition is not just a change in technology, but a philosophical shift from being a 'broadcaster' to becoming a 'curated audio-data provider' for the Yogyakarta intellectual community.

In the intellectual hub of Yogyakarta, Swaragama FM faces a unique challenge termed the 'Metric Gap'. While the station successfully migrated its loyal audience to a high-fidelity mobile application, the economic ecosystem specifically local advertisers remains hesitant to accept digital metrics as a valid form of ROI (Return on Investment). The management of Swaragama must constantly 'educate' the market that 5,000 active app users provide more valuable, targeted data than 50,000 'estimated' terrestrial listeners.

This struggle also underscores the gap within the Hybrid Media System. Although technology has advanced, business logic has not kept pace. Swaragama's Distributional Decoupling by concentrating on the 'brand' and not the 'frequency' is an audacious step toward a data-driven future. In theory, this means that the Renaissance of Radio is not merely a matter of technology shifting but rather a war of Metric Legitimacy. Radio in intellectual markets ought to operate equally as analysts of data as broadcasters.(Fieiras-Ceide et al., 2022)

Swaragama FM and Nebula FM: Navigating the Metric Gap and Social Resilience

Regarding research question 2, this study concludes that the market type determines the degree of algorithmic negotiation. In the urban radio market, known as Gen FM, the station managers are taking a "platform-first" approach. This means that they prioritize algorithmic visibility over human decision-making. In the regional market referred to as Nebula FM, the 'Social Agency' emerges as the leader in

negotiations. This market prioritizes Parasocial Interaction via WhatsApp and community events, placing less emphasis on global streaming metrics. (Ahmed et al., 2024). This indicates that a station's reliance on the infrastructure of Big Tech platforms diminishes as it becomes more localized and 'socially present.' Contrasting with the Jakarta model, Nebula FM in Palu demonstrates that Social Capital is a more effective shield against disruption than technological sophistication. During our interviews, the management emphasized that their WhatsApp groups are more active than their Spotify playlists. This represents Parasocial Interaction in its purest form. In a regional setting where high-speed internet is still a luxury for some, radio functions as a Human Infrastructure. When the global algorithm fails to provide local context (e.g., local weather, community grief, or regional politics), Nebula FM fills the void. This resilience proves that hyperlocalization is not a sign of being "outdated," but rather a strategic decision that prioritizes the "depth" of distribution over its "breadth."

The narrative of Gen.FM in Jakarta illustrates the pivotal transformation in the roles assumed by radio presenters in Indonesia. In the Greater Jakarta region, these presenters have evolved into content creators across multiple platforms, moving beyond the traditional function of merely broadcasting audio from behind microphones. Our findings suggest that Gen FM's "omnichannel media strategy" requires considerable investment in digital resources. Presenters must now create short videos immediately after live broadcasts and publish them on platforms such as TikTok and Instagram Reels. One important figure noted that the success of a radio program today is measured not only by the number of listeners, but also by the potential for viral propagation on social media platforms.

This phenomenon confirms the trend of platformization in cultural production (Nieborg and Poell, 2018), where the logic of the platform (such as TikTok's algorithm) dictates the creative process of broadcasting. Nevertheless, Gen FM strives to uphold its human-centered leadership through "strategic design. They take advantage of their hosts' personal popularity to increase their digital influence, thereby making the algorithm appear human. They are not merely 'posting content'; they are building a digital community that bridges the gap between the terrestrial broadcast and the digital feed. This strategy proves that in a hyper-competitive metropolitan market, radio must sacrifice its linear autonomy to gain 'algorithmic visibility'.(Kinowska & Sienkiewicz, 2023)

Nebula FM Palu: Hyper-Localism and Social Capital as a Defense Mechanism

While Jakarta's Gen FM struggles to gain attention in the global attention economy, Palu's Nebula FM follows a completely different logic: social resilience. In Central Sulawesi, radio is not merely an entertainment medium, but a "social lifeline." Our research found that the key to Nebula FM's survival is not just fine-tuning algorithms. Instead, it is really about how well it connects with the local social scene.

The Power of Parasocial Advocacy

In regional markets, the relationship between presenters and listeners is often more advanced than the typical boundary between stations and listeners, leading to a form of quasi-legal social advocacy. (Mair & Rathert, 2025)As our interviews demonstrated, the management of Nebula FM dedicated their listeners to not merely being passive but also to participating in the daily operations of the station. This is particularly evident when WhatsApp is used as a core distribution channel. Unlike Spotify's cold algorithm, Nebula's WhatsApp groups function like a hyperlocal newsroom where citizens can report everything from infrastructure malfunctions to neighborly complaints.

As one informant from Nebula FM noted:

> "In Palu, people don't go to Twitter or Instagram first when there's a local crisis. They call us. We are their 'Google' and their 'Customer Service' for life in this city. This trust is something that a global platform cannot buy with an algorithm."

Resilience Through Disaster and Disruption

Nebula's survival is also attributed to the collective remembrance of the 2018 Palu earthquake and tsunami. When the disaster struck, mobile networks and the Internet collapsed, and terrestrial radio was the only functioning medium. This historical context solidifies the status of radio as a particularly trustworthy medium.

The strategy employed here is: "Focus on social impact rather than digital ubiquity."(Jareh, 2025) While Nebula FM remains active on social media, it has not adjusted its content to cater to the viral trends of TikTok. Instead, the station prioritizes "deep engagement" over "reach." This finding suggests that, in the

Global South, establishing a strong connection with people is a competitive advantage that protects local radio stations from the onslaught of global streaming giants.

Challenging the Platformization Narrative

The Nebula FM case provides an important counterargument to platformization theory. Although Nieborg and Poell (2018) contend that cultural products are progressively appropriated by platforms, Nebula FM illustrates that strategic resistance via hyperlocalization is both possible and successful. By focusing on content that is “too niche” or “too limited” for global algorithms such as local dialect programs, community obituaries, or regional agricultural news Nebula FM has built a “digital moat” that global platforms like Spotify cannot overcome.

Formulating the "Renaissance Radio" Model: A Framework for Media Resilience

By comprehensively analyzing empirical data from three different market types, we constructed a new theoretical framework, the mobile media ecosystem. This model explains why, against the backdrop of the "audiovisual demise" in the Northern Hemisphere, broadcasting in Indonesia not only survived but also experienced a "revival." This framework is based on three interdependent pillars.(Fauth et al., 2024).

Pillar I: Distributional Decoupling (The Brand over the Frequency)

The first pillar of decoupling represents a significant alteration in the definition of broadcast coverage. Traditionally, the range of radio broadcasts has been primarily limited by the physical distance between terrestrial transmitters and receivers. However, as demonstrated by Swaragama FM, modern radio brands must exist independently of the 101.7 MHz frequency.

Decoupling is not simply getting a website or app streaming. It is a strategic shift to view FM as one of the many nodes in an expanded network. Thus, success is measured not by signal measurement alone, but by total cross-platform performance. Decoupling opens up the management of broadcasting from constraints tied to physical infrastructure. A radio station in Yogyakarta or Palu can maintain its brand awareness even when the content is being accessed from across the globe on platforms such as Spotify or a simple local mobile app. In theory, this detachment forms what is called a "flexible brand" that can surface on any form of digital media while retaining its core identity.

Pillar II: Algorithmic Negotiation (Strategic Grooming)

The second pillar of algorithmic negotiation seeks to address the conflict between the human essence of broadcasting and the technological rationale employed by major technology corporations. The example of Jakarta's Gen FM demonstrates that the survival of urban radio depends on its ability to "strategically adapt." This requires sophisticated negotiation to rework, visualize, shorten, and add metadata to meet the obscure demands of the TikTok and Instagram algorithms.

However, this negotiation is not a compromise. Unlike purely digital media, radio stations use hosts as "algorithmic anchors." While program formats follow platform logic (e.g., 15-second viral clips), the content remains rooted in human warmth and natural humor, and AI-generated playlists do not exist. This principle demonstrates that the resilience of media in the digital age lies in "understanding the platform but not depending on it." It must increase exposure through algorithms and maintain listener commitment using human-oriented approaches.

Pillar III: Human Infrastructure (Social Capital and Parasocial Interaction)

The last and arguably the most enduring pillar is Human Infrastructure. In contrast to the Global North's emphasis on "Technological Infrastructure" such as 5G, DAB+, and AI, the experience of Nebula FM Palu in Indonesia demonstrates that Social Capital serves as the paramount safeguard. This indicates that radio persists in its vitality because of its role as an essential means of social connection.

The relationship established between a listener in Palu and an announcer on Nebula FM transcends mere data exchange; it represents a Parasocial Interaction developed over many years. In times of local crisis or when a community seeks a sense of belonging, individuals do not rely on a global algorithm; rather, they seek out the "voice" in which they place their trust. This concept transforms radio into what can be described as a "Human Infrastructure," serving as a medium that fulfills emotional closeness and social integrative requirements. The Renaissance of Radio emerges as, in an increasingly impersonal digital landscape, the human voice is elevated as a valued commodity.

Synthesis: From "Digital First" to "Fluidity First"

These three pillars combined lead to the conclusion that the survival of Global South media does not depend on a "digital-first" policy, which often leads to the loss of local identity. So, let's talk about "Fluidity First." This concept pertains to the capacity of a media organization to adeptly maneuver through a

continuously evolving digital environment while steadfastly maintaining its fundamental principles of trust and community engagement. It represents a mindset that contests the belief that radio is becoming obsolete, a viewpoint that arises from a limited, traditional perspective that perceives radio as a terrestrial medium. By becoming more flexible, radio has filled the void of indifference and impersonality brought about by the digital transformation. This model provides a versatile framework for traditional media, such as local newspapers and community radio stations, enabling them to reinvent themselves in the platform era.(Mihelj et al., 2022).

Theoretical implication: redefining media resilience

The results of this study significantly influence media studies and the discourse on platform digitization. Historically, the analysis of broadcasting has employed a technologically deterministic perspective, contending that its continued existence is wholly reliant on migration to digital technology. Nevertheless, this study redirects attention to the concept of strategic mobility.

First, the concept of a “mobile media ecosystem” challenges the traditional binary opposition between “traditional media” and “new media.” In the Indonesian context, the Renaissance of Radio is not a replacement of the old by the new, but a sophisticated re-coupling. As seen in the Swaragama and Gen FM cases, the terrestrial frequency is not dying; it is being "re-anchored" as a symbol of trust in an era of digital misinformation. This suggests that for media in the Global South, resilience is found in the ability to move seamlessly between different "states" of distribution analog for trust and digital for reach.

In this study, we take platformization theory (Nieborg & Poell, 2018) a step further by adding the idea of "social resistance" through hyperlocalization. While global platforms like TikTok and Spotify dominate much of the attention economy, Nebula FM demonstrates that quasi-social interaction represents a unique human resource that algorithms cannot devalue. This implies that "algorithmic logic" is not omnipotent but rather a system that can be influenced by deeply ingrained social capital.

Finally, these findings suggest that "Metric Agility" will be the next frontier for media survival. The "Metric Gap" identified in the intellectual-urban market typology indicates that the industry needs new, hybrid standards of measurement that combine the intimacy of radio with the precision of digital data. (Di Mauro et al., 2024).Theoretically, this moves the conversation from "how many people listen" to "how deeply do they engage," which is the true essence of the Radio Renaissance.

Limitations and future research direction

While this study provides a comprehensive framework for Indonesia's mobile media ecosystem, it also has some limitations. First, although this qualitative, multi-site study provides highly detailed information, its statistical results cannot be generalized to the thousands of radio stations across Indonesia. Future research could employ quantitative surveys to validate the three pillars of resilience at the national level: distribution decoupling, algorithmic negotiation, and human infrastructure.

Second, the time span of this study (2024-2026) covers the early stages of 5G broadcast deployment and the peak of the first application of generative artificial intelligence in the field of audio production. As the complexity of AI voice assistants increases, this pillar of "artificial infrastructure" may face new challenges. Future research should explore the intersection of quasi-social interaction and artificial intelligence: can AI voice replicate the social presence that currently protects regional radio stations, such as Nebula FM, from digital erosion?

In this study, we mainly examined things from a management perspective. There is a great chance for future ethnographic research to dive into the "Listener's Journey" within a dynamic ecosystem. Understanding how the Alpha and Z generations switch between terrestrial FM and platformized audio in their daily routines would provide deeper insights into the longevity of the Radio Renaissance. Finally, as the "Metric Gap" remains a significant hurdle for stations like Swaragama FM, interdisciplinary research involving media economics and data science is needed to develop a standardized "Hybrid Currency" for audio advertising that can satisfy both legacy and digital advertisers.

The Future of Sound: Navigating AI and 5G Broadcasting in the Fluid Ecosystem

By 2026, two major technological shifts in the Fluid Media Ecosystem are being led: Generative AI and 5G broadcasting. We have framed this study around the idea that these technologies will not replace radio brands but will act as accelerants to the three foundational pillars of resilience. In markets as metro-driven as Gen FM, it is already in use, assisting with "Algorithmic Grooming" so human creators can propagate multi-platform visual content at velocity. The data does caution that if there is over-usage of AI voices, then the "Human Infrastructure" which makes radio unique can be eroded.

5G broadcasting should be understood as the latest option in terms of information propagation to overcome the prevailing ‘metrics gap.’ Unlike streaming, where data are consumed by the user, 5G broadcasting can deliver broadcast signals to mobile phones, meaning that metrics assumed by advertisers are accessible without consuming any user’s data. This innovation will most probably fill the gap between what public confidence demands from the traditional mode of broadcasting and what a data-driven economy is asking for. The implementation of these technologies at regional radio stations such as Nebula FM does not come without its fair share of concerns, while the much-acclaimed adaptability of this particular station remains grounded within its social impact. Hence, future audio cannot simply be reduced to a human-versus-machine binary but rather convergent hybridity, wherein technology extends its reach and human contact fosters resonance.

5. Conclusion

The transition of Indonesian radio from a "frequency-bound medium" to a Fluid Media Ecosystem is more than a technical migration; it is a philosophical reclamation of the human voice. This study has demonstrated that the "Renaissance of Radio" is occurring because, in an age of algorithmic coldness, people still seek the warmth of companionship and local context. By decoupling the brand from the transmitter, negotiating with global platforms, and reinforcing human infrastructure, radio management in Indonesia has provided a global masterclass in media resilience.

In conclusion, the survival of traditional media in the digital age depends on whether they can become "ubiquitous media.” The Fluid Media Ecosystem framework suggests that the boundaries between analog and digital, linear and on-demand, and human and algorithm are no longer walls, but permeable membranes. For the Global South, this fluidity is the primary currency of the future. Radio is not dying; it is merely changing its state from a solid, fixed object into a liquid, omnipresent influence that flows through every digital crack in modern life.

Acknowledgment

We appreciate the Faculty of Communication Sciences at Dr. Soetomo, University Surabaya, and Padjadjaran University, Bandung, for creating such a supportive academic environment for our research. Their dedication to advancing media resilience research in Indonesia made this collaboration possible. We are also grateful to the management and creative teams at Gen FM Jakarta, Swaragama FM Yogyakarta, and Nebula FM Palu. Their openness, commitment, and valuable insights during data collection were crucial. Sharing perspectives on digital transformation is essential for developing digital media ecosystems. Additionally, we express our gratitude to the representatives of the Indonesian Ministry of Communications and Information Technology (Kemenkominfo) for supplying crucial data regarding the national 5G broadcasting guidelines and enhancement of digital infrastructure. Finally, we thank industry experts and academic colleagues for their constructive feedback during the writing process, which helped to refine our theoretical contributions. This research pays tribute to the resilience demonstrated by the Indonesian broadcasting community in the face of global digital transformation.

Credit Author Statement

Harliantara: Conceptualization, Methodology, Project Administration, Investigation (Gen FM and Nebula FM sites), Writing - Original Draft, Visualization. Dian Wardiana Sjuchro: Validation, Theoretical Refinement (Hybrid Media Systems and Global South perspectives), Writing - Review & Editing, Supervision. Didik Sugeng Widiarto: Data Curation, Investigation (Swaragama FM site), Formal Analysis, Writing - Review & Editing. All authors have read and agreed to the published version of the manuscript.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. There is no conflict of interest with the radio stations mentioned in this study (Gen FM, Swaragama FM, and Nebula FM), as the data was collected for purely academic purposes.

Ethical statement and Informed Consent

This study was conducted in accordance with the ethical standards of the [Insert University Name] Research Ethics Committee. All participants (station managers and regulators) provided their Informed Consent prior to the in-depth interviews. Participants were informed about the nature of the study, their right to withdraw at any time, and the measures taken to ensure the confidentiality of sensitive strategic data. Personal identifiers have been managed to protect the anonymity of informants where requested, focusing instead on their professional roles and institutional perspectives.

Data Avalaibility Statement

The qualitative data (interview transcripts and digital ethnography notes) supporting the findings of this study are available from the corresponding author upon reasonable request. However, some data may be restricted due to the proprietary nature of commercial radio performance metrics and privacy agreements with the participating informants. Digital performance data analyzed from public platforms (TikTok, Instagram, Spotify) are available via the respective station's public archives.

References

6. Abunyewah M., Erdiaw-Kwasie M. O., Okyere S. A., Thayaparan G., Byrne M., Lassa J., Zander K. K., Fatemi M.. N., & Maund, K. (2023). Influence of personal and collective social capital on flood preparedness and community resilience: Evidence from Old Fadama, Ghana. *International Journal of Disaster Risk Reduction*, *94*, 103790. https://doi.org/10.1016/j.ijdrr.2023.103790
7. Adhy Trisnanto. (2025). *Dahsyatnya Radio Masa Depan*. https://www.kompas.id/artikel/dahsyatnya-radio-masa-depan
8. Ahmed, S., Islam, T., & Ghaffar, A. (2024). Shaping Brand Loyalty through Social Media Influencers: The Mediating Role of Follower Engagement and Social Attractiveness. *Sage Open*, *14*(2). https://doi.org/10.1177/21582440241242928
9. Chadwick, A. (2017). *Hybrid Media System*. Oxford University PressNew York. https://doi.org/10.1093/oso/9780190696726.001.0001
10. Colbjørnsen, T. (2021). The streaming network: Conceptualizing distribution economy, technology, and power in streaming media services. *Convergence*, *27*(5), 1264–1287. https://doi.org/10.1177/1354856520966911
11. Di Mauro, M., Galatro, G., Postiglione, F., Song, W., & Liotta, A. (2024). Hybrid learning strategies for multivariate time-series forecasting of network quality metrics. *Computer Networks*, *243*, 110286. https://doi.org/10.1016/j.comnet.2024.110286
12. Fauth, J., De Moortel, K., & Schuurman, D. (2024). Living labs as orchestrators in the regional innovation ecosystem: a conceptual framework. *Journal of Responsible Innovation*, *11*(1). https://doi.org/10.1080/23299460.2024.2414505
13. Fieiras-Ceide, C., Vaz-Álvarez, M., & Túñez-López, M. (2022). Artificial intelligence strategies in European public broadcasters: Uses, forecasts, and future challenges. *El Profesional de La Información*. https://doi.org/10.3145/epi.2022.sep.18
14. George E. Marcus. (1995). Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography. *Annual Reviews Of Anthropology*, *24*, 95–117. http://www.jstor.org/stable/2155931
15. Geryantika Kurnia. (2024). *Paparan Direktur Penyiaran Kemenkominfo pada Forum Diskusi Radio (FDR) Indonesia.*
16. Jareh, A. (2025). Sustainable Social Innovation as a Solution for Systemic Change and Resilience. *Sustainability*, *17*(4), 1583. https://doi.org/10.3390/su17041583
17. Jenkins, H. (2020). *Convergence Culture*. New York University Press. https://doi.org/10.18574/nyu/9780814743683.001.0001
18. Jurriëns, E. (2017). *Digital Indonesia: Connectivity and Divergence*. ISEAS-Yusof Ishak Institute.
19. Kinowska, H., & Sienkiewicz, Ł. J. (2023). Influence of algorithmic management practices on workplace well-being: Evidence from European organizations. *Information Technology & People*, *36*(8), 21–42. https://doi.org/10.1108/ITP-02-2022-0079

20. Li, D., Zhao, X., Liu, S., Liu, M., Ding, R., Liang, Y., & Zhu, Z. (2022). Radio frequency analog-to-digital converters: A systems and circuits review. *Microelectronics Journal*, *119*, 105331. https://doi.org/10.1016/J.MEJO.2021.105331
21. Mair, J., & Rathert, N. (2025). The Political Side of Social Enterprises: A Phenomenon-Based Study of Sociocultural and Policy Advocacy. *Journal of Management Studies*, *62*(6), 2358–2386. https://doi.org/10.1111/joms.13134
22. Metzler, H., & García, D. (2024). Social Drivers and Algorithmic Mechanisms in Digital Media. *Perspectives on Psychological Science*, *19*(5), 735–748. https://doi.org/10.1177/17456916231185057
23. Mihelj, S., Kondor, K., & Štětka, V. (2022). Audience Engagement with COVID-19 News: The Impact of Lockdown and Live Coverage and the Role of Polarization. *Journalism Studies*, *23*(5–6), 569–587. https://doi.org/10.1080/1461670X.2021.1931410
24. Nieborg, D. B., & Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. *New Media & Society*, *20*(11), 4275–4292. https://doi.org/10.1177/1461444818769694
25. Pengurus Pusat PRSSNI. (2025). *Kemenparekraf: Radio Tetap Kanal Strategis Penggerak Ekonomi Kreatif*. https://radioindonesia.co.id/news-detail/kemenparekraf-radio-tetap-kanal-strategis-penggerak-ekonomi-kreatif#:~:text=“Radio bukan lagi medium lama,kompetitif dalam ekonomi kreatif Indonesia.
26. Rega, R. (2025). Media Hybridization and the Strategic Value of Political Incivility: Insights From Italian Journalists. *Media and Communication*, *13*. https://doi.org/10.17645/mac.10236
27. Sjøvaag, H., Olsen, R. K. and Ferrer-Conill, R. (2024). Delivering content: Modular broadcasting technology and the role of content delivery networks. *Telecommunications Policy*, *48*(4). https://doi.org/10.1016/j.telpol.2024.102738
28. Su, B.-C., Wu, L.-W., Chang, Y.-Y.-C., & Hong, R.-H. (2021). Influencers on Social Media as References: Understanding the Importance of Parasocial Relationships. *Sustainability*, *13*(19), 10919. https://doi.org/10.3390/su131910919
29. Suen, H.-Y., & Hung, K.-E. (2025). Enhancing learner affective engagement: The impact of instructor emotional expressions and vocal charisma in asynchronous video-based online learning. *Education and Information Technologies*, *30*(3), 4033–4060. https://doi.org/10.1007/s10639-024-12956-w
30. Wasserman, H. (2011). *Media Ethics Beyond Borders: A Global Perspective*. Routledge Published.
31. Yosepha Debrina Ratih Pusparisa. (2025). *Jurus Bertahan Radio, Perkuat Sisi Kemanusiaan*. https://www.kompas.id/artikel/memupuk-eksistensi-radio-mengembalikan-kemanusiaan-yang-pudar